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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/789,704	02/26/2004	Dieter Stein	12985/3	7582
26646 7590 12/19/2006 KENYON & KENYON LLP ONE BROADWAY NEW YORK, NY 10004			EXAMINER DRODGE, JOSEPH W	
			ART UNIT	PAPER NUMBER
			1723	
SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE	
3 MONTHS		12/19/2006	PAPER	

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/789,704

Applicant(s)

STEIN ET AL.

Examiner

Joseph W. Drodge

Art Unit

1723

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 November 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 6-19,21 and 22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 6-19,21 and 22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 6-19,21 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Australian patent publication 199926019, published 11/11/1999 as patent 749,707 in view of one or both of Kuroda et al PG PUBS Document

US2005/0020853 (effective filing date 1/29/2003) and the Derwent Abstract for Soviet Union Publication SU 390067, October 26, 1973.

For independent claims 6 and 18, the publication discloses a process for the continuous recovery of free tartaric acid from raw materials containing at least 5.0 wt % potassium hydrogen tartrate in dry matter comprising mixing the raw materials with water and dissolving potassium hydrogen tartrate to form a suspension, decanting the suspension to obtain a clarified liquid (all disclosed in the Abstract), subjecting the clarified liquid to a microfiltration to form a microfiltration filtrate (last paragraph of page 2), cooling the microfiltration filtrate to crystallization temperature to form potassium hydrogen tartrate crystals (1st paragraph of page 4), centrifuging the potassium hydrogen tartrate crystals (last line of page 2, taken with the paragraph bridging pages 1-2 "crystals are separated from yeast in suspension by centrifuging"), dissolving the potassium hydrogen tartrate crystals in water (1st paragraph of page 4), removing the potassium from the aqueous potassium hydrogen tartrate solution by ion exchange (2nd paragraph of page 4), and forming tartaric acid crystals by evaporating the tartaric acid solution (paragraph bridging pages 4 and 5).

Also for apparatus claims 18, 19, 21 and 22, the disclosed apparatus comprises a stirred heatable tank 2 containing the suspension, a decanter 7, a microfilter 5, a cooling crystallizer 15, a centrifuge (page 2, last line), a further heated tank 22, a cation exchanger 26, and an evaporator 35.

The claims all differ in requiring the cooling to crystallization temperature to occur under vacuum with apparatus claims requiring apparatus for vacuum cooling. However, Kuroda teaches to cool glycolic acid crystals under vacuum (paragraph 115) while '067 teaches formation of high quality tartaric acid crystals by cooling under vacuum. (Abstract). It would have been obvious to one of ordinary skill in the art to have practiced the Australian '019 method by cooling under vacuum to form crystals and to have utilized the corresponding cooling structural component, as taught by Kuroda and/or '067, since it is well known in the crystallization art that cooling under vacuum forms high quality crystals of tartaric acid and other organic acids.

For claims 7 and 19, the raw material is wine yeast, tartar, or a byproduct material obtained during wine preparation (1st paragraph of the Description on page 1).

For claim 8, the filtrate is obtained by a microfiltration of aqueous tartar solution added to the filtrate provided for the cooling crystallization (pages 2-4).

For claims 9-16, recycling of liquid obtained during microfiltration or other process steps including the crystallization steps is disclosed at (page 3, 2nd full paragraph, and 1st and 2nd paragraph of page 4, etc.)

For claim 17, the cooling crystallization is performed at a temperature of 5 to 15 degrees C (page 4, lines 3-4).

For claim 21, the decanter has a screw or screen discharge (page 4, lines 5-8 of the 1st paragraph referring to a "band filter").

For claim 22 the microfilter is ceramic and has a pore size of 0.05 to 0.6 gm (page 5, last 2 lines).

Applicant's arguments filed November 3, 2006 have been fully considered but they are not persuasive. It is argued that Australian '707 fails to disclose mixing raw materials with water and dissolving to form a suspension since '707 initially forms DKT and then must have a conversion step to separate KHT. However, page 1, part b1 of '707 clearly disclose the mixing/dissolving/suspension-forming step and the instant claims do not preclude there being intermediate or additional steps of conversion.

It is argued that '707 does not suggest cooling to form crystals under vacuum. However, both Kuroda and/or the Soviet Union publication teach that vacuum cooling to form crystals is well known in the crystallization art to form high quality crystals of organic acids such as tartaric acid.

It is argued that '707 discloses centrifugation of yeast in suspension instead of centrifugation of crystals. However, '707 is seen to teach centrifugal separation of crystals from yeast or centrifugation of a yeast suspension /crystal mixture (paragraph bridging pages 1-2 taken with last paragraph of page 2).

Arguments concerning rejections of the claims under the Ciampi patent and the Falcone patent/Collins et al patent combination are persuasive and the rejection of the claims over these prior art references have been dropped.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph Drodge at telephone number 571-272-1140. The examiner can normally be reached on Monday-Friday from 8:30 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wanda Walker, can be reached at 571-272-1151. The fax phone number for the examining group where this application is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either private PAIR or Public PAIR, and through Private PAIR only for unpublished applications. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have any questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JWD

December 16, 2006

Joseph Drodge
Primary Examiner